Center for the Study of Weapons of Mass Destruction

1

December 2004

# Eliminating Adversary Weapons of Mass Destruction: What's at Stake?

by Rebecca K.C. Hersman

occasional paper

# Report Documentation Page

*Form Approved*
*OMB No. 0704-0188*



| 1. REPORT DATE | 2. REPORT TYPE | 3. DATES COVERED |
|---|---|---|
| **DEC 2004** | | **00-00-2004 to 00-00-2004** |

| 4. TITLE AND SUBTITLE | 5a. CONTRACT NUMBER |
|---|---|
| **Eliminating Adversary Weapons of Mass Destruction: What's at Stake?** | 5b. GRANT NUMBER |
| | 5c. PROGRAM ELEMENT NUMBER |
| 6. AUTHOR(S) | 5d. PROJECT NUMBER |
| | 5e. TASK NUMBER |
| | 5f. WORK UNIT NUMBER |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **National Defense University Press,300 5th Avenue,Fort Lesley J. McNair,Washington,DC,20319-6000** | 8. PERFORMING ORGANIZATION REPORT NUMBER |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) | 10. SPONSOR/MONITOR'S ACRONYM(S) |
| | 11. SPONSOR/MONITOR'S REPORT NUMBER(S) |

12. DISTRIBUTION/AVAILABILITY STATEMENT
**Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES
**The original document contains color images.**

14. ABSTRACT

15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | |
| **unclassified** | **unclassified** | **unclassified** | | **38** | |

JOHN F. REICHART
*Director*

**STAFF**

W. SETH CARUS
*Deputy Director*

JOHN P. CAVES, JR.
*Senior Research Professor*

REBECCA K.C. HERSMAN
*Senior Research Professor*

RICHARD A. LOVE
*Research Professor*

GEOFFREY D. KIEFER
*Research Project Specialist*

CREIGHTON HOTTINGER
*Research Project Specialist*

**OCCASIONAL PAPER SERIES**

General Editor: Geoffrey D. Kiefer

**RECENT PUBLICATIONS**

*At the Crossroads: Counterproliferation and National Security Strategy*
April 2004

*Toward a National Biodefense Strategy: Challenges and Opportunities*
April 2003

*Anthrax in America: A Chronology and Analysis of the Fall 2001 Anthrax Attacks*
November 2002

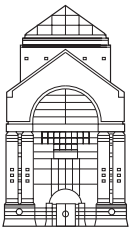
*CBRN Terrorism: An Annotated Bibliography*
May 2002

For additional information, including publication requests, please contact the Center directly at WMDWebmaster@ndu.edu or (202) 685–4234 or visit the Center website at http://www.ndu.edu/wmdcenter/index.cfm

# Eliminating Adversary Weapons of Mass Destruction: What's at Stake?

# Eliminating Adversary Weapons of Mass Destruction: What's at Stake?

*by* Rebecca K. C. Hersman



Published for the
Center for the Study of Weapons of Mass Destruction
by National Defense University Press
Washington, D.C.
December 2004

First printing, December 2004

NDU Press publications are sold by the U.S. Government Printing Office. For ordering information, call (202) 512–1800 or write to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. For GPO publications on-line access their Web site at: http://www.access.gpo.gov/su_docs/sale.html.

For current publications of the Institute for National Strategic Studies, consult the National Defense University Web site at: http://www.ndu.edu.

# Contents

# Eliminating Adversary Weapons of Mass Destruction: What's at Stake?

# Eliminating Adversary Weapons of Mass Destruction: What's at Stake?

The failure to find substantial evidence of nuclear, biological, and chemical weapons in Iraq has exposed serious weaknesses in the U.S. understanding of the weapons of mass destruction (WMD) threat posed by its adversaries as well as in its ability to deal effectively with these threats. A rancorous and highly politicized debate, primarily about the intelligence assessments of Iraqi WMD capabilities before Operation *Iraqi Freedom*, has dominated national discussion for months. Unfortunately, the current preoccupation with intelligence might mask other issues and shortcomings in the American ability to eliminate the threat posed by weapons of mass destruction in the hands of its enemies.

Events in Iraq did not unfold as many might have expected. The expected "smoking gun" never materialized; large stocks of Iraqi weapons of mass destruction were not strewn throughout the countryside. And, most importantly, neither U.S. forces nor innocent civilians had to face WMD use. Even so, weapons of mass destruction were very much a condition of this most recent war in Iraq, simply not in the shape and form that many predicted. The Armed Forces had to plan and prepare for conflict as if WMD use was not only possible but also *likely*. In addition, coalition forces had to prepare to disarm a country of its WMD programs, a mission neither anticipated nor planned for since World War II. This mission has come to be called WMD elimination.

A relatively new mission, or at least a newly rediscovered one (if one includes the precedent of post–World War II Germany), WMD elimination suffered from serious growing pains in Operation *Iraqi Freedom*: incorrect planning assumptions and intelligence, lack of preparation time, and problems with execution and implementation, among others. Yet there also were demonstrable successes, and there are important lessons to be learned from the Iraq experience.

## Background

As tensions between Iraq and the United States worsened in mid to late 2002 and preparations began for Operation *Iraqi Freedom*, policymakers and military planners began to wrestle with the challenges posed by Iraqi WMD. Indeed, Iraqi defiance and deception in the face of United Nations (UN) sanctions coupled with growing fears of WMD transfer to terrorist organizations—most prominently to al Qaeda—were primary reasons for confronting Saddam Hussein. Just as in the first Gulf War in 1991, deterring and defending against possible Iraqi use of WMD against coalition forces were key concerns for planners. However, as the crisis escalated in 2002, Department of Defense (DOD) planners began to foresee another challenge: how to remove comprehensively and permanently the threat of Iraqi WMD not only to U.S. troops but also to the Middle East region and the world.

When faced with this challenge in late fall 2002, military planners and supporting organizations in DOD quickly realized that the comprehensive elimination of an adversary WMD program would entail far more than targeting enemy sites for destruction. In the process, they

### Origins of This Study

In late 2002, the Office of the Secretary of Defense asked the Center for the Study of Weapons of Mass Destruction (WMD Center) to generate lessons and recommendations for elimination operations during and after military conflict. The WMD Center conducted several workshops and a series of roundtable meetings to bring together operators and analysts experienced in elimination operations with key Department of Defense and interagency partners. The WMD Center built a community of interest, gleaned important lessons from prewar planning as well as its conduct and aftermath, and developed recommendations for institutionalizing established capabilities and creating new ones. In addition, in February 2004, the Center hosted a classified conference to address the most important lessons learned from experiences in Iraq and Afghanistan and to discuss how best to institutionalize WMD elimination for future contingencies. The major findings from these activities are reported in this Occasional Paper and are summarized in Rebecca K. C. Hersman and Todd M. Koca, *Eliminating Adversary WMD: Lessons for Future Conflicts*, Strategic Forum 211 (Washington, DC: Institute for National Strategic Studies, October 2004). The Center plans to continue its efforts in these areas.

discovered critical gaps in U.S. preparations for dealing with a WMD-armed adversary. While DOD had made great strides over the last 10 years in improving the U.S. military ability to fight and win in a WMD environment, far less attention had been paid to the tasks of locating, understanding, and removing or disposing of an adversary WMD program. The reasons for this omission are manifold, but most derived from faulty assumptions about the urgency and timing of these activities, their magnitude and scope, and the role of military forces in their completion.

Not surprisingly, military planners initially thought that their role in finding and eliminating adversary programs and capabilities, outside of those actions necessary to protect U.S. forces, would be secondary to other aspects of the war. Many policy experts assumed that the most threatening elements of the Iraqi capability would be neutralized through counterforce and direct attack. Everything else could be deferred until the completion of major combat operations. Some within DOD predicted that rapid regime change itself would produce conditions under which adversary WMD and associated programs could be located and disposed of cooperatively and peaceably. Others assumed that rapid military victory would allow some of the slower processes of WMD elimination to be delayed until the end of major combat operations when security conditions would permit nonmilitary and non-U.S. partners to perform the required tasks. Taken together, these assumptions contributed to a perceived lack of urgency with regard to finding and eliminating Iraqi WMD programs.

In addition, the military planning community assumed that the task of disarming the adversary fell largely outside of military responsibility. In Operation *Desert Storm*, these tasks were not addressed until after the cease-fire agreement, and then they were handled as postconflict activities under UN management. Following the first Gulf War, responsibility to find and eliminate Iraqi WMD programs and assets as required by UN Security Council Resolution 687 belonged largely to the United Nations in the form of the UN Special Commission (UNSCOM) and the International Atomic Energy Agency, and later the United Nations Monitoring and Verification Commission (UNMOVIC). Within the U.S. Government, the lead for these activities fell to the Department of State.

In part, that mission was misunderstood from its inception. UNSCOM was designed to provide an inspection and verification process predicated upon the cooperative involvement of the host nation. It was never intended to investigate and exploit the WMD capabilities of a noncooperative government bent on denial and deception regarding its

illicit activities. However, that is clearly what it became. Given the history of UNSCOM and UNMOVIC inspections of Iraq's illicit weapons programs, it is not surprising that comprehensive elimination of Iraqi WMD programs, including the actual disposition or destruction of weapons stockpiles, initially was considered a secondary task that would likely fall primarily to non-DOD organizations.

This assumption also reflected certain common understandings regarding the division of labor between DOD and other government departments and agencies, particularly the State Department, in matters pertaining to WMD proliferation. Over the last 10 years, the definition of nonproliferation has evolved and is understood as "the sum of all nonmilitary attempts to stop, slow, and roll back NBC [nuclear, biological, and chemical] programs of other states and actors."[1] While DOD often plays an important role in these activities, lead responsibility usually belongs to the State Department and other appropriate Federal entities. DOD efforts to combat proliferation have become widely known as *counterproliferation*, which is generally understood to focus on DOD efforts to assure "that U.S. forces and interests can be protected should they confront an adversary already armed with weapons of mass destruction" through deterrence, defense, and counterforce.[2] Unfortunately, efforts to find, secure, and destroy Iraqi weapons of mass destruction in conjunction with and immediately following military conflict did not fall neatly into either bureaucratic basket.

As plans for Operation *Iraqi Freedom* developed, weaknesses in all of these assumptions began to surface. Planners realized that the requirement to understand and secure WMD programs could surface well before the completion of major combat operations. It was also clear that finding, securing, and ultimately removing or destroying these weapons and programs could require far more resources than previously anticipated. Finally, DOD faced a growing awareness that it had far too few available and trained military assets for the mission, and nonmilitary assets were virtually nonexistent. While some effort had gone into developing a specialized, but limited, capability for sensitive site exploitation (SSE), it became obvious that these assets and capabilities would not be sufficient for the projected task. The United States possesses some highly effective capabilities for locating and eliminating nuclear, biological, and chemical threats. However, these capabilities are designed for smaller, geographically limited operations, not the larger, geographically dispersed activities associated with a major military contingency. In addition, the

nonproliferation community was not prepared to take on large-scale exploitation and dismantlement operations, especially in a hostile or even semipermissive environment.

As conflict drew closer, planners recognized these challenges and took steps to plan for and build additional capabilities. As has since become clear, however, many assessments and assumptions remained relatively unaltered from the prewar through the combat stages. Only after the start of combat operations were serious problems identified, particularly in the critical area of prewar intelligence.

## Operation *Iraqi Freedom*

Despite disagreement and confusion among policy and military experts about the exact role of the military in this area—for how long, if at all, it would assume primary responsibility, and when and to whom it would hand off responsibility for the mission—in late 2002, DOD embarked on a crash course to develop the capabilities and concepts necessary for locating, understanding, and removing or disposing of an adversary WMD program. A new mission, WMD elimination, was created, and planners set to work trying to define, adapt, and incorporate this mission into existing and developing war plans.

Planners began crafting concepts of operations to allow troops on the ground to locate, characterize, and compile data on Iraqi WMD and attendant development programs and delivery systems—a process known as *exploitation*. As efforts continued through the winter, military planners settled on a multitiered and sequenced approach to eliminating the WMD problem in Iraq. DOD began designing an exploitation task force that could locate, identify, characterize, and, to a very limited extent, secure and disable adversary WMD capabilities. Smaller scale units, each comprised of fewer than a dozen individuals, would locate and identify sites of interest and perform a first-order analysis of whatever was uncovered. These units, called at various times sensitive site teams (SSTs) or site assessment teams (SATs), would be forward deployed with maneuver elements. Larger and more robust than the SSTs would be three mobile exploitation teams (METs). They would perform confirmatory analysis on sites visited by SSTs, as well as other sites identified on an ad hoc basis. With greater analytical, logistical, and manpower capabilities, the METs would systematically exploit sites and people of interest as maneuver elements pushed ahead toward their objectives. Manning the SSTs and

METs were both military and civilian experts from across the services and various defense agencies.

To provide command, control, and supporting capabilities to these newly formed units, military planners selected an artillery brigade headquarters, the 75th Field Artillery Brigade from the U.S. Army III Corps under the command of Colonel Richard McPhee, and renamed it the 75th Exploitation Task Force (75th XTF). With much of its heavy equipment aboard ship off the coast of Turkey—a victim of Ankara's refusal to allow its southern provinces to be used as a staging area for large-scale U.S. ground forces—this unit appeared likely to be kept out of the war. Within weeks, however, the 75th Field Artillery Brigade found itself with a new name and a new mission. The 75th Exploitation Task Force would lead the effort to find and secure Iraqi WMD.

Elements within the Office of the Secretary of Defense remained concerned that even the new capabilities anticipated by the 75th XTF might not be sufficient to disable and eliminate the nuclear, biological, and chemical weapons and infrastructure expected to be found in Iraq. Thus, in late March 2003, the Defense Threat Reduction Agency (DTRA) was assigned the mission of WMD disablement and elimination in Iraq. Task Force Disablement and Elimination (TF D/E), under the command of Captain Richard Weyrick, would take the lead in disabling and disposing of any weapons or WMD-related equipment and materials discovered by the 75th XTF or other units. In addition, special operations forces (SOF) would also play an important role in the hunt for Iraqi WMD. Tasked with a wide variety of missions, certain SOF units also had responsibilities related to finding and neutralizing WMD threats. Importantly, neither TF D/E nor SOF was subordinate to the 75th XTF. Indeed, TF D/E reported to an entirely separate major subordinate command, although it still came under the authority of the Coalition Forces Land Component Commander. SOF units involved in WMD exploitation and elimination generally reported directly to U.S. Central Command headquarters.

Supporting the 75th XTF and these other units in their assignments was a range of individuals and organizations drawn from across the Department of Defense. These included intelligence specialists, microbiologists, physicists, chemists, and other scientific experts and uniformed personnel experienced in handling hazardous materials. For example, the U.S. Army Nuclear and Chemical Agency (USANCA) created a nuclear disablement team to assist DTRA and TF D/E efforts.[3] The Army's Technical Escort Unit also contributed its unique experience with

### Challenges in the Iraqi WMD Hunt

Even before the end of major combat operations, several important operational problems surfaced:

- The character of operations shifted from an expected focus on illicit weapons and agents to a much more geographically dispersed "investigation" of potential WMD sites.
- Existing intelligence produced "dry holes" with little information or evidence of WMD activities at suspected sites.
- Assessment teams armed with WMD detection equipment, developed for force protection rather than for identification and analysis of agents in the field, registered false positives at an alarming rate.
- Most teams had expected a focus on chemical agents and weapons, but, in reality, radiological materials (non–weapons-grade) played a much larger role.
- Most teams lacked sufficient training, expertise, and operational concepts for retrieving important information contained in documents and computers, developing human intelligence, or conducting forensic analysis.
- Shortfalls in transportation, security, logistics, and other enabling capabilities delayed operations and limited effectiveness.
- Systematic and comprehensive looting, public disorder, and a hostile security environment made exploitation operations complex, resource-intensive, and dangerous.

detecting, monitoring, rendering safe, and escorting WMD materials. In addition to this specialized expertise, the 75th XTF required myriad enabling capabilities drawn from major subordinate commands in theater, notably the Army V Corps and Marine Corps I Marine Expeditionary Force (I MEF). Such capabilities included transportation (air and ground), logistics, communications, linguists, security, and explosive ordinance disposal. Similarly, connections with the Intelligence Community and U.S. Government and nongovernmental scientists behind the front lines provided important reach-back analytical capabilities.

The speed and professionalism with which the 75th XTF and other elimination organizations activated and deployed were commendable but could not fully compensate for the lack of preexisting plans, doctrine, training, exercising, and resources. Not until February 2003 was the 75th XTF able to bring its constituent elements together to begin training, developing, and testing specific tactics, techniques, and procedures. At the

same time, general guidance from senior-level military and civilian leaders continued to undergo refinement. As conflict commenced in March, the weaknesses of the intelligence guiding the targeting process and shaping exploitation priorities posed increasing challenges. Moreover, the 75th XTF lacked the organic transportation, communication, and security assets necessary to establish and maintain positive control over key sites and positions. V Corps and I MEF, which supplied many of these enabling capabilities to the 75th XTF, had to reconcile competing priorities. Delays and shortfalls inevitably followed. Finally, as the hunt for Iraqi WMD grew more complex and the smoking gun providing concrete evidence of weapons programs proved surprisingly elusive, exercising effective and integrated command and control over all the different units associated with the WMD hunt became more difficult.

Even before the end of major combat operations, several operational problems surfaced. First, the character of the operations shifted from an expected focus on illicit weapons and agents to a much more geographically dispersed investigation of potential WMD sites. Existing intelligence was producing "dry holes" with little information or evidence of WMD activities at suspected sites. Operations suffered from a range of command and control problems including inadequate mission deconfliction, strained span of control, communication and handoff problems, and blurred mission ownership. In addition, the technology supporting these operations often proved inadequate. For example, assessment teams armed with WMD detection equipment developed for force protection rather than agent identification and analysis registered false positives at an alarming rate. Also, most of the teams had expected a focus on chemical agents and weapons, but in reality, radiological materials (non–weapons-grade) played a much larger role. In addition, many of the teams lacked sufficient training, expertise, and operational concepts for retrieving important information contained in documents and computers, for either human intelligence development or forensic analysis. Moreover, systematic and comprehensive looting, public disorder, and a hostile security environment made exploitation operations complex, resource intensive, and dangerous.

In response to these difficulties, significant changes regarding the WMD elimination mission were under way by April 2003. With little WMD material to disable or destroy, efforts shifted toward a more geographically dispersed investigatory approach. Leaders both in theater and in the continental United States recognized the need to make forensic

and analytical components larger and more robust. On-the-ground intelligence, particularly human intelligence, expanded substantially, and operations moved away from the site-centric approach that prevailed during the early weeks of the war. Replacing it was an approach focused more on gleaning intelligence from people and documentation. In line with this shift, in late April and May, the 75th XTF began transferring its responsibility for WMD exploitation operations to the nascent Iraq Survey Group (ISG). In June 2003, the 75th XTF—resuming its prior designation as the 75th Field Artillery Brigade—returned to Fort Sill, Oklahoma, and Colonel McPhee assumed the position of chief of staff of the 24th Infantry Division (Mechanized), at Fort Riley, Kansas.

While the ISG assumed full operational control in mid-June 2003, several weeks passed before the organization could fully deploy and function in support of the WMD elimination mission. In Washington, concerns about the search escalated, and, in Iraq, operations foundered as leadership over the elimination mission remained unclear. Unfortunately, in the operational pause that occurred as the 75th XTF began to step down and the ISG began to form, operating conditions in Iraq deteriorated as a result of looting, insurgency, and terrorism. By most accounts, it was not until midsummer, when David Kay took control, that the ISG became fully operational. During the transition between the 75th XTF and the ISG, however, many sites had suffered depredations from looting and destruction, intentional or otherwise, seriously hampering long-term efforts to get to the bottom of Iraq's prewar WMD efforts.

Much of the success of the 75th XTF, special operations forces, and follow-on ISG has been masked by the seemingly futile hunt for WMD stockpiles, but certain accomplishments should not be overlooked. In a matter of weeks, a large conventional unit was transformed into a site exploitation organization. In the course of the development and deployment of the 75th XTF, the U.S. military built a preliminary force structure, plans, definitions, and community around the entirely new concept of WMD elimination. With little training, few concepts of operation, and no prior doctrine, these teams operated safely on the battlefield in a hostile environment. As conditions and requirements changed, the organization adapted—first, as preexisting intelligence regarding WMD sites proved less useful than hoped, and later, as the scope of the mission broadened to encompass a full accounting of Iraqi WMD programs and their history (as under the ISG). While not uncovering the large-scale stockpiles or extensive research, development, and production programs that many anticipated,

the ISG has shed considerable light on illegal Iraqi WMD activities. Moreover, it has done so in an environment in which much information was lost to looting, vandalism, and coordinated destruction. That said, major improvements must be made if the United States is to prevail in future conflicts with WMD-armed adversaries.

## Why Does WMD Elimination Matter?

Today, much of the WMD elimination capability developed for the war in Iraq has been dismantled. The ISG, while still operating, remains an ad hoc organization that currently has no institutionalized reactivation capability. Unfortunately, the risk remains significant that U.S. forces will be needed to locate, exploit, and eliminate weapons of mass destruction on foreign territory in future conflicts.

Given the extent of nuclear, biological, and chemical proliferation around the globe, the United States can ill afford to assume that any significant future adversary would not possess a WMD capability. Threats might stem from either a hostile state or terrorist actor bent on subverting U.S. interests or mission success. With numerous states currently seeking or possessing such weapons, preparations for prevailing against their use obviously will be critical to military strategy and planning, but developing effective WMD elimination capabilities is equally important. Even absent the use of these weapons on the battlefield, it is difficult to imagine a major military contingency where establishing a comprehensive accounting of and control over these capabilities would not be a major strategic priority. Moreover, the United States might be forced to do so under conditions even more stressful than those experienced in Iraq.

Elimination operations can also play a vital role in the war on terrorism. As demonstrated by evidence uncovered in Afghanistan, the public exhortations of terrorist leaders, and repeated incidents over the last decade, terrorists have a serious and growing interest in acquiring and using NBC weapons. An ability to root out and destroy that capability is essential to winning the war on terrorism. Elimination operations might be needed to prevent terrorist acquisition of WMD by removing sources of precursor agents or raw materials, denying access to developmental facilities, scientists, and their knowledge, and securing completed weapons themselves. Precluding the opportunity for terrorist organizations to acquire weapons of mass destruction from a sympathetic regime or to gain control of materials, know-how, and weapons in the chaotic aftermath of a military campaign is essential. Elimination operations cannot substitute

for the range of tools needed to deal with active WMD proliferation between states or from states to groups. But in wartime and postwar scenarios, conducting speedy and comprehensive WMD elimination operations might be the first, best, and only effective tool.

In addition to major military contingencies and aspects of the war on terrorism, the United States might face the prospect of having to enter a state to secure, remove, or destroy portions or the entirety of its WMD arsenal or infrastructure when growing domestic discontent or destabilization caused by radical elements risks the use or proliferation of such weapons or technology. A number of known or suspected WMD states are threatened by destabilization from either internal or external sources. Loss of control of a country's nuclear, biological, or chemical arsenal or production facilities to terrorists or hostile states would pose a grave national security threat to the United States. WMD elimination might become necessary even where WMD materials were either previously unknown or unsuspected. Emerging intelligence or outright discovery of weapons of mass destruction or related materials in destabilized or deteriorating regions or states would pose serious proliferation risks that might only be solved through elimination operations.

Understanding and accounting for adversary NBC programs are vital parts of any strategy to combat weapons of mass destruction. Revelations in Afghanistan, Iran, Iraq, Libya, North Korea, Pakistan, and elsewhere demonstrate the interconnectedness of the proliferation challenge. The networks crafted by Saddam Hussein, A.Q. Khan, Moammar Qadaffi, and Kim Jong-Il—not to mention others not yet known—will not be readily recognized or easily severed. U.S. forces in Iraq continue to learn about Saddam Hussein's activities (WMD-related and otherwise) and doubtless will be translating and analyzing documents and data well after U.S. troops relinquish control. Even a defeated or subdued state can pose a serious proliferation challenge—and gaining a complete understanding of how its proliferation networks operate might be equally daunting.

Recognizing these risks, in May 2003, Deputy Secretary of Defense Paul Wolfowitz made clear that the U.S. military could not afford another standing start when facing a WMD elimination mission. Speaking at the annual symposium of the Center for the Study of Weapons of Mass Destruction, he said:

> The elimination capability that we put together in the months before Operation *Iraqi Freedom* will need to be retained, enhanced, and institutionalized. . . In future conflicts we should not end up playing

> "pickup games" when we are trying to put together forces for eliminating weapons of mass destruction in the aftermath of a conflict. We must ensure that there are sufficient forces in peacetime, adequately trained, organized and equipped for that mission.

While Wolfowitz's call was clear, the way ahead has proven far murkier. Developing forces, concepts, doctrine, plans, and training for a new mission area is always challenging. While some smaller steps have been taken to prepare the U.S. military for future WMD elimination missions, particularly in terms of planning guidance, much more remains to be done. As the weeks and months pass, complacency about the need for an ability to eliminate weapons of mass destruction is a growing danger.

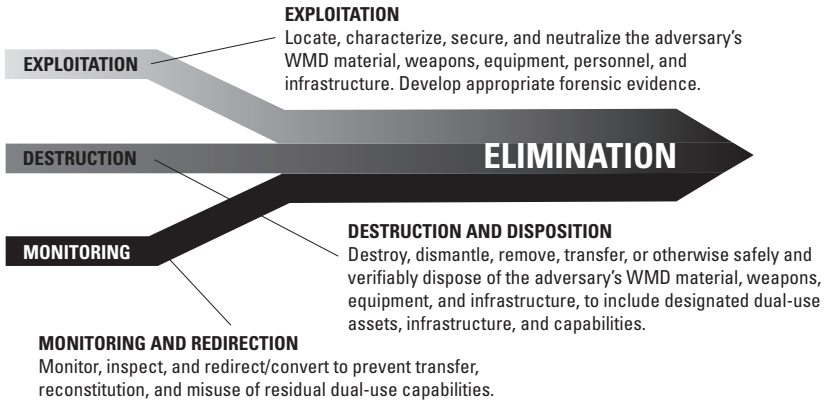
## What Is WMD Elimination?

Although the standard dictionary definition of eliminate is rather simple—"to get rid of; remove"—the complexity of the WMD elimination mission and its constituent parts continues to defy concise and consistent terminology. Language and terminology are not just an academic exercise, especially when it comes to military doctrine, planning, and operations. One of the greatest challenges for those involved in this issue has been developing and standardizing definitions that are universally understood within the DOD community and interagency elements. Indeed, achieving a standardized vocabulary—by which strategic planners and operational commanders can understand and measure success for tasks assigned—is key to establishing effective elimination operations.

In responding to the WMD elimination requirements in Iraq, the U.S. military created not only entire organizations, structures, and concepts but also a whole new vocabulary. Unfortunately, *elimination*, *exploitation*, *destruction and disablement*, *sensitive site exploitation*, and other words associated with these activities do not convey the same meanings to everyone. Without common terms and reference points, reaching agreement between DOD and interagency elements on roles and responsibilities will prove impossible.

In the judgment of the analysts in the Center for the Study of Weapons of Mass Destruction, WMD elimination is best viewed as an umbrella concept that includes the range of activities necessary to effect the systematic control, removal, or destruction of a hostile nation's or

Figure 1. **WMD Elimination Defined**




organization's capability to research, develop, test, produce, store, deploy, or employ nuclear, biological, chemical, or radiological weapons.

Elimination, therefore, is not simply the final portion of a process leading to the ultimate physical seizure, destruction, or removal of weapons of mass destruction and their delivery means. Rather, elimination includes the entire process of locating and characterizing these programs as well as destroying, removing, or neutralizing them and ensuring that they will not be reconstituted or transferred in the future. Within the broad mission outlined above, three primary tasks are apparent: exploitation, destruction and disposition, and monitoring and redirection (figure 1).

When faced with a WMD-armed adversary, the United States must eliminate not only the weapons themselves but also the attendant programs, infrastructure, and expertise. However, WMD elimination can be distinguished from other disarmament activities, such as cooperative threat reduction or negotiated international agreements between relatively cooperative partners, because the elimination mission is focused on real or potential adversaries whose WMD programs and capabilities threaten U.S. interests. Clearly, this is a broad mission and mandate, but one with a unified purpose: to remove completely and verifiably the threat of WMD from a hostile state or organization.

## Not Just a Postconflict Mission

WMD elimination cannot be delayed until the postwar phases of operation when major combat operations have ceased and cannot simply be viewed as a postcombat activity. Some WMD elimination operations might be essential for basic U.S. force protection. Yet targeting will inevitably entail the destruction of evidence and information necessary for effective exploitation. In areas where U.S. military forces do not have positive control, potentially lucrative sites and targets will be vulnerable to looting and transfer or leakage to local civilians, criminals, terrorists, or hostile states. In cases where an extended occupation is neither realistic nor feasible, the U.S. military might have no choice but to expedite the exploitation and elimination of WMD programs in conjunction with other major combat operations. When the United States engages a WMD-armed adversary, the process of eliminating these capabilities will inevitably span all phases of conflict from prewar engagement through combat operations to postwar reconstruction.

A military strategy that relies on holding and securing WMD sites until they can be exploited and destroyed in a more leisurely fashion (preferably by nonmilitary forces) fundamentally misunderstands the nature of these programs. This approach depends greatly on having nearly perfect intelligence (personnel will know exactly where to go, when to go, and what to secure) rather than recognizing the reality that intelligence will be flawed and uncertain and that the most important intelligence is likely to be collected once U.S. forces are on the ground. It also assumes that the adversary is likely to maintain its WMD programs in highly centralized bunkers, warehouses, and manufacturing facilities. This assumption is directly contrary to the growing understanding of how adversaries are likely to develop and maintain these programs in the future. Decentralized and dispersed hide sites and dual-use facilities are far more likely to characterize the WMD programs of the future.

Even where larger facilities are correctly identified, effective security is a profoundly daunting prospect during combat operations. The U.S. military learned this painful lesson at Tuwaitha, the largest nuclear facility in Iraq. Contrary to some reports, the military knew the site was important and did not ignore it. Unfortunately, the security force was insufficient to secure a facility of 23,000 acres with over 90 buildings. Hence, the U.S. guards could do little but watch when Iraqis looted the facility.

In addition, an entirely site-centric approach to eliminating adversary WMD capabilities is likely to fail. Documents, data, and

individuals might be far more important, both in terms of understanding the programs and preventing their spread.

## Whose Job Is It?

Effective WMD elimination operations require a single, integrated command and control structure for all phases of conflict and across a broad range of scenarios. In the case of Iraq, the transition from one ad hoc organization to another resulted in costly delays and loss of operational momentum at a critical juncture. In addition, elimination operations cannot be viewed solely from a land component perspective. Rather, elimination planning and operations must be tightly integrated with counterforce and air operations as well. It is essential that DOD take a joint approach to planning and executing WMD elimination operations and that these activities are not relegated to a single service component. It is simply not realistic to improvise a mission of this importance and complexity. DOD must take steps in peacetime to ensure that the plans and doctrine as well as trained and equipped forces necessary to eliminate adversary programs are in place.

Without a standing command and control headquarters for WMD elimination to identify resources and capabilities, lead the planning process, and direct training and exercises, it is unlikely that the United States can prepare effectively for the next conflict. It is urgent that DOD begin the process of bounding the scope, scale, and standards of that organization. While DOD has numerous options for designing and

### Organizations Contributing to WMD Elimination

- Military services
- Combatant commands
- Office of the Secretary of Defense
- The Joint Staff
- Defense Threat Reduction Agency
- Defense Intelligence Agency
- Central Intelligence Agency
- Department of State
- Department of Energy
- National Security Council/Executive Office
- Department of Homeland Security
- National Laboratories (Sandia, Los Alamos, and others)
- Federal Bureau of Investigation

During wartime, add:

- Land component commander and specific military units (for example, V Corps and I Marine Expeditionary Force during Operation *Iraqi Freedom*)
- Coalition partners

deploying such a headquarters, there are certain prerequisites: it must be joint, operationally focused, and able to interact with international and interagency elements, and it must provide senior command leadership.

The Department of Defense has considerable experience with these types of organizations. Joint Task Force Civil Support, which is designed to plan, train, and prepare for DOD support to consequence management requirements, provides a useful comparison. This task force was intended to establish a "one-stop shop" for a complex mission that would rely on task-organized, high-demand, low-density assets operating in a joint capacity. For WMD elimination, a similar structure with a general officer in command would provide accountability for planning, equipping, and training for these operations during peacetime and would head a single integrated command structure during military operations. This structure would go a long way toward rectifying many of the deconfliction and discontinuous command problems that plagued WMD elimination operations in Iraq. While some assets would undoubtedly need to be assigned permanently to the headquarters, other operational elements could be identified beforehand through mutual agreements and provided with regular training and exercising for their WMD elimination mission.

DOD needs an institutionalized WMD elimination capability, but it cannot and should not take a go-it-alone approach. In some cases, elimination activities might be best led by non-DOD agencies and organizations where the Defense Department plays a supporting role. Even when WMD elimination occurs in the context of military operations or larger-scale contingency operations, DOD dependence upon nonmilitary capabilities is considerable. Elimination operations will depend upon civilian subject matter experts and technicians, civilian contractors for destruction and removal operations, and representatives of international organizations for observation and verification purposes, not to mention intelligence operators and analysts. Ideally, the U.S. military would prefer not to involve civilians in such operations until a more permissive security environment has been established; unfortunately, that might not be realistic.

In preparation for WMD elimination operations, U.S. civilians deserve adequate training and preparation no less than their military counterparts, especially when they deploy into combat zones or otherwise hostile security environments. The problem is more complex than it first appears, requiring a careful review of policy and doctrine with regard to uniforms, firearms, insurance, pay, and other issues. Civilian

capabilities should be pre-identified, trained, and deployment-certified, with preliminary contractual arrangements set up in advance. Failure to make such arrangements as part of the planning process might result in unnecessary risks to civilian and military personnel.

## What Are We Looking For?

WMD elimination is more than *finding* nuclear, biological, and chemical weapons; it is about understanding the range of activities the adversary has undertaken to acquire these weapons, including development, production, and employment. While existing weapons pose the most immediate threat, WMD weapons are an end product of a long process. To eliminate an adversary's WMD program, the United States must be able to identify and locate research and development as well as production capabilities in each of the major weapon categories (nuclear, biological, and chemical) and delivery systems. This programmatic approach is especially important because many potential WMD-armed countries might develop mobilization or break-out systems that can be put into production and weaponized in fairly short order, without maintaining stocks of weapons. This problem is particularly acute in the area of biological weapons but also is a concern in terms of chemical and radiological threats.

Another key aspect of a programmatic approach is to ensure that exploitation teams focus their efforts not only on geographic sites and physical evidence, but also on documents, data, and individuals that might prove to be vital sources of information. Unfortunately, in Iraq, WMD elimination was often viewed as a subset of sensitive site exploitation rather than the opposite. In the initial planning concepts, locating and eliminating WMD was one of several SSE mission areas including war crimes, counterterrorism, Baath Party leaders, and prisoners of war/missing in action. The SSE, or site-centric approach, resulted in a disproportionate emphasis on technical exploitation of sites and the collection of physical evidence even after it became clear that the lists of pre-identified sites were not yielding much information. Although equally important, exploitation operations targeting data, documents, and people were largely ignored until much later. While sites may prove critical for providing conclusive evidence of illicit WMD activity and for securing dangerous weapons, agents, and precursors, they must not be the exclusive focus of elimination operations.

Documents, data, and people are absolutely essential for reconciling prewar estimates with postwar reality.

## Building an Effective Elimination Capability

WMD elimination is a highly interdisciplinary activity. Effective operations will demand a fusion of operational capability, subject matter expertise, and intelligence support. Elimination forces must be able to interpret and report on intelligence, analyze and respond to emerging information, and develop operational approaches on short notice and in hostile environments. This approach demands a degree of flexibility and coordination unlike most standard ground combat maneuvers. Where collocation is impossible or unduly risky, forces must have secure, interoperable, and reliable communication with experts and analysts in the continental United States or remotely located. This demands not only robust communications technologies, but also the authority and command and control arrangements necessary to permit direct dialogue and deconfliction.

### Resource Allocation

Efficient allocation and distribution of scarce assets are essential elements of WMD elimination planning and operations. Maintaining the right balance of deployed operational and reach-back capabilities is vital. In Iraq, WMD exploitation and disablement capabilities were distributed across three main tiers: site assessment teams performed preliminary assessments and triage and generally were assigned directly to maneuver elements; mobile exploitation teams provided more in-depth assessment of highly suspect sites; and rear-area reach-back capability provided direct support to the ground combatant commander on WMD issues and included support for document exploitation and interrogations.

Operational tiers must be carefully defined as well as appropriately trained and equipped for their assigned tasks. Operational, analytical, and intelligence capabilities must be allocated and distributed carefully to assure maximum effectiveness. Some integration of WMD exploitation/collection capabilities into the maneuver elements is critical for rapid field exploitation and force protection. In Iraq, site assessment teams were assigned to the major maneuver elements to provide preliminary evaluations of potential sites as a triage function. Operationally, these teams proved useful in their ability to move quickly, but they often

lacked necessary equipment and expertise. In the future, elements resembling site assessment teams or mobile collection teams moving with the ground forces to provide initial assessments of emerging and ad hoc sites are likely to be important, but those elements need to be more robust than the teams deployed in Operation *Iraqi Freedom*. They also must be prepared to assess other non–site-based information sources such as scientists and documents. To do so, such forward elements must possess more sophisticated and reliable identification and analysis capabilities as well as linguistic and human intelligence support.

The concept of follow-on, specialized, mobile WMD teams is sound, but only if these teams have the necessary security, transportation, communications, and support capabilities to move quickly to suspect locations, perform the necessary site analysis, and locate key individuals and data. In most cases, maintaining intelligence and subject matter expertise reach-back in theater rear areas is costly and security-intensive and provides little or no benefit in terms of responsiveness and turnaround times. Whenever possible, reach-back assets and experts should remain in the continental United States with their resources, data, and networks, using augmented communications capabilities to respond to the needs of the combatant commander.

## Force Structure

While many problems associated with WMD elimination operations can be addressed through improved planning, doctrine, training, and concepts of operation, any shortfalls in force structure will inevitably affect all mission aspects. In Operation *Iraqi Freedom*, much of the WMD elimination capability was put together on an ad hoc basis. Sensitive site exploitation teams, site assessment teams, mobile exploitation teams, and, later, the ISG, were created at the last minute for Iraq operations. A substantial military asset, the 75th Field Artillery Brigade, was converted very late in the process to support this mission. Today, these capabilities have largely been dismantled, and nothing has taken their place. Deployable units with WMD elimination applicability, such as the Army's Technical Escort Unit, are high-demand, low-density assets with far more missions and requirements than personnel to carry them out. Nuclear, biological, chemical, and radiological experts are in limited supply in the U.S. military. Deployable experts with country-specific knowledge and experience are even more rare.

Elimination operations obviously require highly specialized expertise (in microbiology, chemistry, and physics, for example) and equipment (sophisticated detectors, mission-oriented protective posture and decontamination gear, and sampling and forensic kits, to name a few). Less obvious, but no less important, are the enabling capabilities that allow subject matter experts to carry out their activities. Key among these capabilities are security forces, transportation assets (air and land), linguistic support, intelligence assets (both in-field and reach-back), communications equipment and operators, and other logistics. Pre- or post-conflict, and particularly during a war, these enabling capabilities are likely to be in high demand and short supply. Speed is crucial to the success of any elimination mission. In addition, the security, communications, transportation, and other support assets and personnel needed to move WMD-specific capabilities around hostile and semipermissive territory are in short supply within the active-duty ranks. These shortfalls would severely limit effective WMD elimination operations, especially as part of larger, more complex operations. Ensuring quick and reliable access to enabling capabilities is essential, including developing organic capabilities when necessary, for units tasked with WMD elimination.

## WMD Intelligence

Detecting and understanding WMD programs of potential adversaries is a decades-old challenge. In the case of this most recent conflict, the Intelligence Community might have overestimated the scope and capability of Iraqi WMD programs. As a result of this finding and the highly politicized public debate about Iraqi weapons that ensued, some observers might conclude that the overall WMD threat to national security is overestimated. Even where agreement on the threat exists, others might believe that the United States has the necessary capabilities to deal with WMD when and where it encounters such programs and activities. Unfortunately, this is not the case.

In fact, while overestimating the threat was the problem, underestimation of the threat is more the historical norm.[5] For more than 5 years after the first Gulf War, even with inspectors in place, the United States continued to sell short the extent of Iraqi WMD capabilities. Operation *Enduring Freedom* produced alarming discoveries about the intent of al Qaeda to develop and use nuclear, biological, chemical, and radiological agents. Recent International Atomic Energy Agency reports raise grave concerns about previously undetected elements of the Iranian nuclear

program;[6] and negotiations with Libya have uncovered far more extensive chemical and nuclear programs than previously estimated.[7] North Korea now claims to possess a nuclear deterrent, and its other WMD capabilities are thought to be extensive. Yet a detailed understanding of the whereabouts of North Korean WMD programs and this reclusive regime's concepts and intent for using these weapons remain elusive. Finally, an intercepted shipment of centrifuge parts combined with admissions from Libya led to the discovery that Pakistan's chief nuclear scientist had been trafficking in nuclear weapons technology with a number of countries hostile to the United States.[8] The ramifications of these activities are yet to be fully understood.

The United States must substantially improve its intelligence capabilities, particularly in the areas of human intelligence and counterintelligence, for locating and characterizing potential adversary WMD programs. Successful elimination operations require accurate intelligence to guide their planning and execution. The U.S. Government must appropriately resource intelligence collection and analysis against adversary WMD programs as well as appropriately account for adversary counterintelligence activities. Where intelligence on WMD-related sites and individuals is weak, prioritizing targeting and operations is nearly impossible. Even with a robust WMD elimination operational capability, the United States cannot possibly secure, exploit, and dispose of hundreds of sites concurrently.

Nevertheless, the gaps in WMD intelligence are extensive and unlikely to be filled in the near term. Former Director of Central Intelligence George Tenet testified on several occasions that the prospects are high for gaps and surprises in U.S. understanding of potential adversary programs.[9] Elimination operations must expect and plan for these gaps and surprises and be flexible and responsive to emerging intelligence. The cycling of new information and intelligence between operational elements and the Intelligence Community must be improved and enhanced.

This fusing of operations and intelligence is one of the most critical attributes of successful WMD elimination operations. Perhaps nowhere is it more important than in the development and management of human intelligence. People, more than things, lie at the heart of any adversary WMD program. Not only are people a critical source of information and intelligence about the program, but they are also a proliferation risk themselves. Clear policy guidance in terms of incentives, amnesty, and interrogation is absolutely essential to effective management of the human aspect of elimination operations. Similarly, clear and

established command and control, tactics, and procedures are essential to protect key individuals and ensure their participation. When different military and intelligence units use different standards and policies with regard to potential information sources and detainees, effective elimination operations are jeopardized.

## Avoiding the Wrong Lessons from Iraq

The context in which the move toward institutionalizing WMD elimination has occurred cannot be ignored. The gap between prewar estimates of Iraqi WMD, at least as understood by many operators and policymakers, and evidence on the ground of Iraqi nuclear, biological, or chemical activities in all likelihood will never be closed. In January 2004, David Kay left the ISG, and in his presentation before Congress declared: "We were almost all wrong."[10]

Given the outcome of the Operation *Iraqi Freedom* weapons hunt, the potential for learning the wrong lessons is high. Three particular wrong lessons may appear attractive or logical but could bode ill for the future if given credence.

*Wrong Lesson 1:* "Iraq is an outlier case; therefore, we won't have to do this often." While removing WMD threats under nonhostile circumstances, as in Libya, is far more preferable than doing so through conflict, it appears likely that the U.S. military will be called upon to conduct WMD elimination operations nearly as often as it is called upon to go to war. Most foreseeable adversaries have actual or suspected WMD capability. The Nation cannot afford to be less prepared in this area than it is for general battlefield success. Just as worrisome is the commitment of most terrorist networks to acquire weapons of mass destruction by preying on the vulnerabilities of weak, impoverished, or failed states.

*Wrong Lesson 2:* "Intelligence failure explains everything." This conclusion implies that with the proper intelligence, ad hoc U.S. preparations for WMD elimination operations would have been sufficient. However, the WMD hunt in Iraq cannot be explained as a single point of failure. Despite the valiant efforts of many people, WMD elimination operations in Iraq revealed substantial problems concerning the ability to conduct WMD elimination operations, from planning and doctrine to training and exercises to capabilities and resources. In this business, pick-up games are dangerous. Moreover, perfect intelligence is an unattainable goal. The Armed Forces need to be able to operate in uncertainty. Forces must be able to locate, exploit, and disable WMD programs in hostile states, even in the

absence of precise, actionable intelligence. If the Nation allows a simple summary of "intelligence failure" to suffice as explanation of the WMD experience in Iraq, it will miss the larger lesson.

*Wrong Lesson 3:* "This isn't a DOD mission; this is somebody else's job." Some argue that the WMD hunt in Iraq demonstrates how DOD should not have these responsibilities, that military forces should do the minimum necessary to secure sites and areas, and that most WMD elimination activities should be left in the hands of civilian or international entities with expertise in these areas. Unfortunately, that assessment simply does not stand up to scrutiny. When the United States engages a WMD-armed adversary or is required to undertake military operations in pursuit of weapons of mass destruction, the first order of business is finding, securing, and eliminating those weapons. So much vital knowledge and information has been permanently lost in the chaos of postwar Iraq and the rampant looting that followed the U.S. invasion that the true parameters of Iraqi WMD activities will almost certainly never be known. Indeed, in *Iraqi Freedom*, the United States may well have gotten lucky in terms of WMD dispersal—at least there were not large stock piles of chemicals or biological weapons for international terrorists or Iraqi insurgents to plunder after major combat operations had ceased.

## Key Judgments and Recommendations

President George W. Bush has said, "America will not permit terrorists and dangerous regimes to threaten us with the world's most deadly weapons."[11] The United States might not seek a war with a WMD-armed adversary, but should such a war come, will the Nation be ready to find and eliminate these weapons? Will America take its chances and play another "pickup game," or will it "ensure that there are sufficient forces in peacetime, adequately trained, organized and equipped for that mission"?

Despite the difficulties faced by operators in Iraq, critical lessons can be learned from the experience of *Iraqi Freedom*. The 75th Exploitation Task Force, TF D/E, special operations forces, and the Iraq Survey Group all provide a wealth of information and experience that can and must be tapped as policymakers and planners move to institutionalize the WMD elimination mission. Although there are many, eight overarching lessons emerge. The United States should:

*Embed and Institutionalize the Mission.* As with any task undertaken as part of combat operations, WMD elimination must be fully integrated into the deliberate planning process and reflected in all major base

plans, the strategic planning guidance, contingency planning guidance, and the budget development process. If this is not done, WMD elimination will simply not exist as a DOD mission. Institutionalizing it makes it real. To do that, clear, standardized definitions and terms of reference for the WMD elimination mission and its constituent elements must be created, observed, and embedded in planning and doctrine. Without common terminology and well understood definitions, both accurate assignment and execution of mission tasks are impossible.

*Organize for Success.* Current and likely future threats require a standing peacetime WMD elimination organization specifically assigned the WMD elimination mission. This organization should have a clearly established and accountable command and control structure, trained personnel, a combination of pre-identified and dedicated assets, and a general officer in command. This structure should be readily augmentable and deployable, and capable of operating, in one form or another, across all phases of a conflict. This organization must be joint in character, preferably as part of a combatant command. Moreover, though this structure should be military in nature, it should establish strong and deep links with interagency and international partners, civilian experts, and the private sector. This office can then provide a center of focus for DOD-wide efforts on this issue, act as the primary conduit for information, doctrine development, training, and exercising, and coordinate DOD activities with (the necessary) contributing civilian organizations. The Department of Defense should neither attempt single-handedly to resource and conduct this mission nor concede its role. The U.S. ability to conduct WMD elimination operations effectively depends upon integration of DOD, interagency, nonmilitary, and non-U.S. assets, capabilities, and knowledge, both strategically and operationally, even during combat operations. Effectively managing transitions between military and civilian command and control is equally important. Without an organization to guide plans, training, exercise, and procurement, WMD elimination risks becoming an "orphan" mission area. It must have a clear and accountable organizational home.

*Prepare for the Worst.* Coercive disarmament is an inherently nonpermissive activity. The urgency of the mission demands moving as quickly as possible, concurrently with major combat operations when necessary, to find, secure, and exploit WMD programs. In addition, even operations planned for or delayed until postconflict are likely to be conducted under less-than-hospitable circumstances, whether resulting from the popular resistance, military holdouts, guerrilla activity, contamination

(in cases of WMD use or unintended agent release), looting, or general instability. Viewing WMD elimination as just another postconflict activity to be conducted at some later date in a largely permissive environment is simplistic and dangerous and increases the likelihood that such operations will ultimately be unsuccessful.

*Plan for Surprise.* While improving WMD intelligence is absolutely vital, gaps and surprise are the norm rather than the exception in dealing with WMD intelligence. Elimination planning must reflect that reality. Elimination operations must be flexible and responsive to emerging intelligence and the cycling of new information. The sharing of intelligence and collaboration between operational elements and the Intelligence Community must be improved and enhanced. In addition, WMD elimination must incorporate a strong counterintelligence element into planning and operations.

*Train and Exercise.* Forces tasked with WMD elimination must have the opportunity to test plans and procedures, practice command and control, and resolve difficulties in advance of the actual mission. Only through advance preparation and exercise can DOD address potentially debilitating issues such as deconfliction, communications, intelligence and information sharing, and competing logistical demands before they pose a threat to mission success. Units must be given time to test plans with one another so that such problems can be mitigated or resolved. Moreover, intensive red-teaming of concepts and strategies prior to conflict will better prepare coalition forces for the aggressive counterintelligence efforts and adaptive tactics, techniques, and procedures employed by hostile elements as they attempt to conceal or destroy evidence of WMD activities.

*Target Programs, Not Places.* WMD elimination missions need to follow a program-centric approach designed to achieve a comprehensive understanding and full accounting of adversary WMD programs and capabilities. As such, efforts should be fully integrated and balanced between exploiting sites, people, and data/documentation. This will allow U.S. forces to collect and utilize the entire panoply of information and evidence and do so as rapidly and effectively as possible. Adopting a program-centric approach puts a premium on fusing subject matter expertise, intelligence assets, security, linguistics, and other supporting capabilities—creating truly interdiciplinary units. Sensitive site exploitation is a wholly inadequate concept on both points and in Iraq contributed to an unhelpful divide between intelligence operations (people

and documents) and military operations (sensitive site exploitation). DOD will have to be creative and capabilities-based in developing approaches to fuse these skills in an operationally realistic fashion.

*Employ and Improve Technology.* DOD must look to technological innovation to enhance the efficiency, speed, and overall effectiveness of WMD elimination operations as well as to reduce manpower requirements. Key areas of focus include detection, monitoring, analysis, communications, agent and weapons neutralization or defeat, and security. In addition, many of the problems experienced in *Iraqi Freedom*—recurring false positives of chemical agent detectors, insufficient bandwidth to convey images and information from real-time sites under exploitation, and looting and intentional destruction caused by inadequate or nonexistent security at sites of interest—could be ameliorated by such innovations. Technological improvements could reduce the overall number of forces needed for WMD elimination operations by increasing the pace of operations, reducing the number of personnel required to conduct them, or providing equivalent analytical, investigative, and support capabilities to teams of reduced size. As shown in Operation *Iraqi Freedom*, manpower, logistical, and intelligence demands can be extreme not just in wartime, but also before and after. Using technology to make more of these capabilities organic to WMD elimination units might be an effective way to help bring demands and resources into closer alignment.

*Maintain Focus.* Directing senior-level military and civilian attention to the issue of institutionalizing and resourcing the WMD elimination mission within DOD and the broader national security community is itself a serious challenge. Yet without effective advocates at the upper echelons of government, adequate funding and prioritization simply will not materialize. Without knowledgeable and active senior-level advocates to ensure sustained funding, a significant WMD elimination capability is unlikely to be developed.

## What's at Stake?

As noted by President Bush, "The greatest threat before humanity today is the possibility of secret and sudden attack with chemical or biological or radiological or nuclear weapons."[12] With the passage of time, these weapons are becoming both easier to acquire, build, hide, and transport and more appealing to states and terrorists who seek to threaten the United States and its allies.

A robust WMD elimination capability is essential to meeting this threat and protecting Americans from catastrophic disaster. Hostile states and terrorists have every incentive to pursue the acquisition and use of weapons of mass destruction if they believe that the U.S. ability to detect, locate, and destroy these capabilities is inadequate. Moreover, to engage in military conflict with a WMD-armed or suspected adversary without the plans, doctrine, and capabilities necessary to find and eliminate their weapons of mass destruction is to court disaster. To do so endangers future military operations and the protection of U.S. forces and civilians, risks a crisis of confidence among coalition partners and allies, and might worsen the proliferation of these weapons and capabilities through dispersal, leakage, and dissemination. There can be no enduring victory in situations in which an adversary is defeated but its weapons of mass destruction or the ability to produce them remains intact. The United States simply cannot afford to be wrong when it comes to eliminating the world's most dangerous weapons in the hands of its most dangerous enemies.

## Notes

[1] Barry R. Schneider, *Future War and Counterproliferation: U.S. Military Responses to NBC Proliferation Threats* (Westport, CT: Praeger, 1999), 47.

[2] Ibid., 47.

[3] Gerard Vavrina and John Greaves, U.S. Army Nuclear and Chemical Agency, "Nuclear Disablement Team Operations in Operation *Iraqi Freedom*," Parts 1 and 2," *NBC Report* (Fall/Winter 2003), 7–10, and (Spring/Summer 2004), 25–30.

[4] Paul D. Wolfowitz, remarks at the National Defense University Conference on Counterproliferation, Fort Lesley J. McNair, Washington, DC, May 13, 2003; available online at <www.defenselink.mil/speeches/2003/sp20030513-depsecdef0203.html>.

[5] David Kay, testimony before the Senate Armed Services Committee Hearing on Iraqi Weapons of Mass Destruction Programs, January 28, 2004.

[6] See, for example, Douglas Frantz, "Gaps Seen in Iran's Nuclear Disclosure; The U.N. Monitoring Agency Issues a Report Citing Concerns About the Origin of Traces of Enriched Uranium, Among Other Issues," *Los Angeles Times*, February 25, 2004, A3; Sonni Efron and Douglas Frantz, "Secret Iranian Nuke Plan Discovered; After a Pledge to Disclose its Activities, Tehran Hid Blueprints for a Device to Enrich Uranium for Bombs or Civilian Uses, U.N. Inspectors Say," *Los Angeles Times*, February 13, 2004, A1; Joby Warrick, "Iranian Nuclear Plans Found; U.N. Team's Discovery Raises Doubts About Tehran's Vow of Candor," *The Washington Post*, February 13, 2004, A1.

[7] See, for example, Joby Warrick and Peter Slevin, "Libya's Disclosures Put Weapons in New Light; Programs for Unconventional Arms Were Ambitious, but Plagued with Problems," *The Washington Post*, March 2, 2004, A1; Douglas Frantz, "Libya's Arms Development Surprises U.N.; Program, Which Dates to the Early 1980s, has Produced Plutonium and Assembled the Basic Components to Enrich Uranium for a Weapon," *Los Angeles Times*, February 21, 2004, A3; Stephen Fidler, Mark Huband, and Roula Khalaf, "Success of Libya's Nuclear Procurement Effort Revealed," *The Financial Times* (London), January 22, 2004, 6.

[8] See, for example, David E. Sanger and William J. Broad, "From Rogue Nuclear Programs, Web of Trails Leads to Pakistan," *The New York Times*, January 4, 2004, A1; Douglas Frantz, "In

Pakistan, Atomic Bomb Developer Questioned; Possible Links Between Nuclear Programs in Pakistan and Iran are Said to be Investigation; Familiar Centrifuge Designs are a Focus," *Los Angeles Times*, December 23, 2003, A10.

[9] George J. Tenet, testimony before the Senate Select Committee on Intelligence on the Worldwide Threat: Converging Dangers in a Post–9/11 World, February 6, 2002; George J. Tenet, testimony before the Senate Select Committee on Intelligence on the Worldwide Threat, 2001: National Security in a Changing World, February 7, 2001; George J. Tenet, testimony before the Senate Select Committee on Intelligence on the Worldwide Threat in 2000: Global Realities of Our National Security, February 2, 2000.

[10] Kay, testimony before the Senate Armed Services Committee, January 28, 2004.

[11] George W. Bush, remarks on Weapons of Mass Destruction, February 11, 2004.

[12] Ibid.

# About the Author

*Rebecca K.C. Hersman* joined the Center for the Study of Weapons of Mass Destruction at the National Defense University in November 1998. Her primary projects have involved the role of the Department of Defense in mitigating the effects of chemical and biological weapons attack (consequence management) both in the United States and against U.S. interests abroad, concepts and strategies for eliminating an adversary's WMD programs, as well as proliferation issues facing the Department of Defense more generally. Previously, Ms. Hersman was a 1997 International Affairs Fellow with the Council on Foreign Relations and spent her fellowship year at the Brookings Institution working on executive-legislative relations and foreign policy.

Ms. Hersman completed her undergraduate study at Duke University and received her master's degree from Georgetown University. She is the author of *Friends and Foes: How Congress and the President Really Make Foreign Policy* (Washington, DC: Brookings Institution Press, 2000).

## Center for the Study of Weapons of Mass Destruction

National Defense University

Since its inception in 1994, the Center for the Study of Weapons of Mass Destruction (previously the Center for Counterproliferation Research) has been at the forefront of research on the consequences of weapons of mass destruction (WMD) for American security. Originally focusing on threats to the Armed Forces, the WMD Center now also applies its expertise and body of research to the challenges of homeland defense and security. In February 2004, President George W. Bush commended the Center for providing "vital insight into the dangers of a new era."

The broad mandate of the Center includes research, education, and outreach. Its research focuses on understanding the security implications of weapons of mass destruction, as well as the challenge of fashioning effective responses to them. Education and outreach programs seek to enhance awareness in the next generation of military and civilian leaders of the WMD threat as it relates to defense and homeland security policy, programs, technology, and operations. As a part of its outreach efforts, the WMD Center hosts annual symposia on key issues, bringing together experts and participants from the government and private sectors.


Center for the Study of Weapons of Mass Destruction
National Defense University
Washington, D.C.